

CLAIMS

1. A vaccine useful in inducing immune protection against arthritogenic peptides in a host comprising substantially pure dnaJp1 peptide in a pharmaceutically acceptable carrier.
2. The vaccine according to Claim 1 wherein the dnaJp1 peptide is an isolated, bacterial peptide.
3. The vaccine according to Claim 1 wherein the dnaJp1 peptide is a synthetic or recombinant peptide.
4. The vaccine according to Claim 1 further comprising dnaJ protein or peptide fragments thereof other than dnaJp1 peptide.
5. The vaccine according to Claim 4 wherein the dnaJ protein or peptide fragments are composed of amino acids organized in a sequence found in a bacterial dnaJ protein.
6. The vaccine according to Claim 4 wherein the dnaJ protein or peptide fragments are composed of amino acids organized in a sequence found in a human dnaJ protein.

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7. The vaccine according to Claim 2, wherein the dnaJp1 peptide is produced by bacteria selected from at least one of the genera consisting of *Escherichia*, *Lactococcus*, *Klebsiella*, *Proteus*, and *Salmonella*.
8. The vaccine according to Claim 1 further comprising an immunostimulatory compound.
9. The vaccine according to Claim 8 wherein the immunostimulatory compound is TGF- α .
10. A vaccine useful in inducing immune protection against arthritogenic peptides in a host comprising a recombinant gene expression vector which encodes dnaJp1 peptide.
11. A method useful in inducing immune protection against arthritogenic peptides in a host comprising administering an immunologically effective amount of dnaJp1 peptide to the host.
12. A method useful in inducing immune protection against arthritogenic peptides in a host comprising administering a recombinant gene expression vector which encodes dnaJp1 peptide to the host for expression in an immunologically effective amount of dnaJp1 peptide in the host.

Sub A3

Sub A4

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13. A method for determining whether an individual is predisposed to rheumatoid arthritis comprising determining the presence or absence of anti-arthritisogenic peptide antibodies in a biological sample obtained from the host by immunoassay of the sample, wherein the presence of such antibodies is indicative of predisposition to rheumatoid arthritis.
 14. The method according to Claim 13 wherein the anti-arthritisogenic peptide antibodies targeted in the immunoassay are anti-dnaJp1 antibodies.
 15. The method according to Claim 13 further comprising determining whether the individual possesses HLA DR antigens whose primary structure includes the RA susceptibility sequence.
 16. A kit for determining whether anti-arthritisogenic peptide antibodies are present in a biological sample obtained from an individual comprising labelled anti-dnaJp1 peptide antibodies.
 17. The kit according to Claim 16 further comprising oligonucleotides which specifically hybridize to known HLA DR antigens.

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